

November 6, 1946

Dr. William B. Castle
Boston City Hospital
Boston
Massachusetts

Dear Bill:

I now have a graduate student (Harvey Itano, M.D.) beginning work on the problem of the relation between the nature of the hemoglobin in sickle cell anemia and the phenomenon of sickling.

He has not found any references in the literature to the work that you were telling me about, which, if I remember correctly, indicated that the dividing line between sickling and non-sickling came at 50 percent oxygenation of the hemoglobin or 50 percent combination with carbon monoxide. Could you tell me whether you and your collaborators have published any of this work, send me reprints if it has been published, and send me a brief statement about the results if it has not been published.

Last summer Dr. Burch told me that he felt sure that the phenomenon was due to a large amount of carbon dioxide. I have read his papers, and it seems to me that all of his results can be explained by assuming that the carbon dioxide treatment removes oxygen.

We are hoping to get some interesting results by studying other compounds of hemoglobin.

With best regards, I am

Sincerely yours,

LP:gw

Linus Pauling